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### REMARKS

Claims 1-14 are pending and at issue in the above-identified patent application. Of the claims at issue, claims 1, 7, 9, and 13 are independent. By way of the foregoing, claims 2 and 8 have been amended to eliminate any objection under 37 CFR 1.75(d)(1) that may have been proper.

Additionally, claims 2, 3, 4, 5, and 8 have been amended to eliminate language referring to steps to further clarify that such claims are not to be construed under 35 U.S.C. § 112, ¶6. It is respectfully submitted that such amendments are not limiting and have not been made for reasons related to patentability.

In light of the following remarks, it is respectfully submitted that the pending claims are in condition for allowance and reconsideration is respectfully requested.

### Objections

Claims 2 and 8 were objected to under 37 CFR 1.75d)(1). By way of the foregoing, each of claims 2 and 8 have been amended to recite that the predefined threshold is set to the determined first priority value, and that a second digital object is received, its priority calculated and compared to the predefined threshold, and displayed if the calculated priority is greater than the predefined threshold. The foregoing amendments are presented to better clarify the original claim language and to better correlate the claims language to the description found in the original specification at, for example, page 24, line 13 to page 25, line 13.

It is respectfully submitted that no new matter has been added and that the foregoing modifications should eliminate any objections that may have been proper.

### The Rejections under 35 U.S.C. § 102

#### Claims 1-6 and 9-12

Claims 1 and 9 are directed to a method and an apparatus for selecting digital objects for display in a digital program guide. Claims 1 and 9 recite receiving a digital object, determining first and second fuzzy variables associated with the digital object and determining a priority by mapping the first and second fuzzy variables onto a profile surface adapted for determining preferences associated with a television viewer. Claims 1 and 9

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further recite comparing the determined priority to a predefined threshold and selecting the digital object for display in the electronic television program guide if the first priority crosses the predefined threshold.

The Office action rejected claims 1 and 9 as anticipated by Knee et al. (US 2002/0095676 A1). However, as explained below, reliance on Knee is misplaced because Knee fails to disclose a profile surface adapted for determining preferences associated with a television viewer, the mapping of first and second fuzzy variables onto the profile surface, and the determination of a priority by mapping the fuzzy variable values onto the profile surface. Further, Knee fails to disclose the comparison of the determined priority to a threshold to select a digital object for display in an electronic television program guide.

While Knee discloses a plurality of comparisons for targeting advertisements, Knee does not disclose or suggest a profile surface or the mapping of first and second fuzzy variable onto the profile surface. In particular, Knee discloses a *tabular demographic matrix* (see Fig. 2) where each cell of the table includes predetermined weight values for use in targeting advertisements to specified users. In other words, Knee discloses a simple table of demographic data, wherein each demographic category includes a predetermined weight value, either calculated via user interaction, or assigned a default value. Knee does not disclose a three dimensional profile surface, which as described in the present application, includes an interrelation between demographic categories as well as the interpolation of missing data using fuzzy logic values. In the disclosed table of Knee, there is no interrelation or interdependence between the values associated with each of the demographic categories, nor is there any interpolation of data, based on limited data points to form a profile surface. To the contrary, Knee requires known or default data for each demographic cell included within the table and Knee does not disclose the interpolation of data to form an integrated profile surface.

Additionally, Knee does not disclose the mapping of data onto a profile surface. Rather, Knee discloses a straight forward, category by category, cell by cell, comparison between set advertisement demographics and user preferences. In particular, Knee teaches a brute force comparison between each individual demographic category and each user preference threshold. While the comparison of Knee requires a cell by cell data comparison, it does not require the three dimensional mapping of data points onto a profile surface. In

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fact, the comparison of Knee requires the existence of data for each demographic category. In contrast, by mapping fuzzy variables onto an interpolated profile surface, the present application may make an intelligent estimate as to a user preference, even when limited or no data exists.

Further, Knee discloses a simple threshold comparison approach to target advertisements to users, and does not disclose the determination of a priority based upon a mapping of demographic data onto a profile surface. Specifically, Knee teaches that to determine whether an advertisement is displayed, a comparison between each predetermined value threshold and the desired advertisement value for each demographic category is conducted, and if an advertisement does not meet each demographic category threshold, the advertisement is not be displayed to the user. Alternatively, Knee may use an absolute value approach, wherein all the absolute differences are added together to determine which advertising object is the closest fit. In other words, Knee still compares each individual demographic category to a threshold to determine how different the advertisement is from the user's profile. Knee simply does not disclose or suggest the mapping of first and second fuzzy variables onto a profile surface to calculate a priority number.

Still further, because Knee utilizes a category by category demographic comparison to a threshold, Knee does not disclose the calculation of a priority and the comparison of the determined priority to a threshold to determine whether to display the object to the user.

Because Knee does not disclose a profile surface, the mapping of first and second fuzzy variables onto the profile surface, the determination of a priority associated with the mapping of the variable onto the profile surface, or the comparison of the determined priority to a threshold to make display decisions, it follows that Knee does not anticipate claims 1 and 9. Based on at least the foregoing deficiencies noted in the Knee reference, it is respectfully submitted that claims 1-6 and 9-12 are in condition for allowance.

#### **The Rejections under 35 U.S.C. § 103**

##### **Claims 7-8 and 13-14**

Independent claims 7 and 13 are directed to methods and apparatus that may be used to delete from memory digital objects associated with a television program guide. In particular, claims 7 and 13 recite determining first and second fuzzy variables associated with

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a digital object, determining a priority by mapping the first and second fuzzy variables onto a profile surface adapted for determining preferences associated with a television viewer, and selecting the digital object for deletion from memory if the priority crosses a predefined threshold.

The Office action rejected claims 7 and 13 as unpatentable over the combination of Knee and Lazarus (US 5,652,613). As described above, Knee employs a simple tabular demographic matrix comparison to selectively display an advertisement to a user. Additionally, as described above, Knee does not utilize fuzzy variables or mapping to a profile surface, to determine a priority or to selectively display a digital object based on the determined priority. In addition to these deficiencies, Knee is deficient with respect to claims 7 and 13 in that it does not disclose or suggest selecting a digital object for deletion from memory if the priority crosses the predefined threshold. This fact is conceded on page 8 of the Office action.

The Office action seeks to cure the deficiency of Knee using Lazarus. Lazarus is directed to an intelligent program guide memory management system and method. In particular, Lazarus discloses deleting the least valuable program guide information when additional memory is needed in the program guide system. The Lazarus system manages memory by first deleting all information that is obsolete and then by performing memory triage if available memory is still insufficient. Memory triage includes assessing program guide information value and deleting the least valuable program guide information. Lazarus discloses that value of program information is assessed by evaluating program age (length of time since they were stored) and a program value that has been assigned to the channel. However, for all of its disclosure, it is respectfully submitted that Lazarus does not disclose or suggest using fuzzy variables or mapping fuzzy variables to profile surfaces, as recited by claims 7 and 13.

Both Knee and Lazarus fail to disclose or suggest the use of fuzzy variables and the mapping of fuzzy variables to profile surfaces. It follows that no combination of these references can render obvious the claimed system.

In addition, even if fuzzy variables and desirability of mapping fuzzy variables to profile surfaces were disclosed in one or the other of Knee and Lazarus, there would be no motivation to make the combination of Knee and Lazarus that is suggested by the Office

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action. This is because the demographics determination of Knee is directed to either displaying or ignoring advertising objects transmitted in a television signal, whereas Lazarus is directed to deleting programs. It is respectfully submitted that one of ordinary skill in the art would not be motivated to include the deletion of Lazarus in the advertising display system of Knee because Knee solves the problem of directed advertisement in a television broadcast system by showing a user specific advertisements while ignoring other transmitted advertisements, whereas the Lazarus system deletes superfluous information stored in memory. In fact, the fact that the Knee system never discloses the storing of advertisement objects and simply ignores any transmitted advertisement not selected, counsels against the combination of Knee and Lazarus because the resulting combination would yield a system that stores and deletes advertisement information. This is in direct contravention to the teachings of Knee.

Accordingly, for at least these reasons, it is respectfully submitted that claims 7 and 13, and any claims dependent thereon, are in condition for allowance.

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**Conclusion**

If there is any matter that the examiner would like to discuss, the examiner is invited to contact the undersigned representative at the telephone number set forth below.

Respectfully submitted,



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